**Eastern Plant Board**  
88th ANNUAL MEETING Proceedings  
Harrisburg, Pennsylvania  

Click on [blue bracketed text] for supplemental material attached.

**TUESDAY**  
April 9, 2013

<table>
<thead>
<tr>
<th>Morning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussion – EPB Members Only</td>
</tr>
<tr>
<td>APHIS PPQ Meeting</td>
</tr>
<tr>
<td>CBP Meeting</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Afternoon</th>
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<tbody>
<tr>
<td>Joint Session EPB/CAPS/HIS</td>
</tr>
<tr>
<td>Opening Ceremony</td>
</tr>
<tr>
<td>FFA</td>
</tr>
<tr>
<td>Welcome</td>
</tr>
<tr>
<td>George Greig, PA Secretary of Agriculture</td>
</tr>
<tr>
<td>Vicki Smith, CT – EPB President</td>
</tr>
<tr>
<td>LBAM Harmonization Plan Update</td>
</tr>
<tr>
<td>Billy Newton APHIS PPQ</td>
</tr>
<tr>
<td>[ppt]</td>
</tr>
</tbody>
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~ Break sponsored by USAPlants ~

<table>
<thead>
<tr>
<th>Impatiens Downy Mildew</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virginia Brubaker, Griffin Greenhouse</td>
</tr>
<tr>
<td>[ppt]</td>
</tr>
</tbody>
</table>

**Phytophthora** yet to come  

<table>
<thead>
<tr>
<th>Dr. Seong Hwan Kim, Director, Plant Disease Diagnostic Laboratory, Pennsylvania Department of Agriculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ppt]</td>
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<table>
<thead>
<tr>
<th>Boxwood Blight – Lingering issues?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vicki Smith CT</td>
</tr>
<tr>
<td>[ppt]</td>
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</tbody>
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**Federal Noxious Weed Program Update**  

<table>
<thead>
<tr>
<th>Scott Pfister APHIS PPQ</th>
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</thead>
<tbody>
<tr>
<td>[ppt]</td>
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</tbody>
</table>

**Pests, The Scenic Overlook**  
Guided discussion of new pests and policy/survey/inspection/industry impacts  

<table>
<thead>
<tr>
<th>Scott Pfister APHIS PPQ</th>
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<tbody>
<tr>
<td>[ppt]</td>
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</tbody>
</table>
### Morning

<table>
<thead>
<tr>
<th>View from the National Plant Board</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Mike Cooper, ID - NPB President</em></td>
</tr>
<tr>
<td>[ppt]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>View from the PPQ Field Operations and Budget Update, Raleigh Office</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Jim Schoenholz, APHIS PPQ</em></td>
</tr>
<tr>
<td>[ppt 1] [ppt 2]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Customs and Border Protection Overview from the Ports</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Mr. Mikel Tookes CBP</em></td>
</tr>
<tr>
<td>CPB and Sequestration – Sequestration plan shared with field offices and ports; suspension of all hiring; two of three classes of Ag. Specialists suspended; travel mission critical only; training suspended; joint/special operations suspended; impacts include shifting focus to highest priorities, fewer inspectors at port, fewer seizures, fewer pest interceptions</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Invasive Plants – State Approaches</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Panel and guided discussion</em></td>
</tr>
<tr>
<td>Faith and Carol will work on summary of EPB state laws/regulations/policies for posting on Website</td>
</tr>
</tbody>
</table>

~ Break ~

<table>
<thead>
<tr>
<th>USFS Report: Forest Health Program</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Bob Lueckel US Forest Service</em></td>
</tr>
<tr>
<td>[ppt]</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>USDA Firewood Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Paul Chaloux APHIS PPQ</em></td>
</tr>
<tr>
<td>- Renewed FOCI agreement with TNC</td>
</tr>
<tr>
<td>- Renewed HUT agreement with TNC</td>
</tr>
<tr>
<td>- quite a bit of money for firewood-related</td>
</tr>
<tr>
<td>- CPHST working on collecting information on effective heat treatments for various pests</td>
</tr>
<tr>
<td>- To underpin APHIS-recommended treatments for firewood</td>
</tr>
<tr>
<td>- Continue to engage with AFPDA on industry run certification program</td>
</tr>
<tr>
<td>- 3 levels of certification</td>
</tr>
<tr>
<td>- Gold = 160 degrees for 90 minutes</td>
</tr>
<tr>
<td>- Silver = 160 for 75 minutes</td>
</tr>
<tr>
<td>- Bronze = 140 for 60 minutes</td>
</tr>
<tr>
<td>- Record keeping and Labeling Rule</td>
</tr>
<tr>
<td>- Requires place of origin and place of production on label</td>
</tr>
<tr>
<td>- Must keep records on inventory purchased to make firewood and sales of firewood</td>
</tr>
<tr>
<td>- Also records on treatments if treatment claimed on label</td>
</tr>
</tbody>
</table>
o Undergoing paperwork burden analysis now, hope to move out of the agency this spring or early this summer – all the usual caveats about timing during rulemaking

NAASF Update
Cecelia Clavet NAASF, Don Eggen PA DCNR

[Forest Health Committee Report pdf]

Plum pox virus in PA – A retrospective
Dr. Ruth Welliver, Plant Pathology Program Manager
PA Department of Agriculture

[ppt]

~ Break ~

Longwood Gardens Educational Tours
Sentinel Plant Network, Public Gardens Association

THURSDAY
April 11, 2013

Morning

The Pennsylvania WoodMobile traveling exhibit available for viewing

The Changing Face of Regulated Industries – New arenas for pest detection and regulation
Panel discussion

Paul Lyskava, Executive Director, Pennsylvania Forest Products
- PA is largest hardwood production state
- Interested in regulating movement of forest pests
  Challenges:
  - EAB and TCD – Impacts were localized and temporary; ash @5% forest composition and product sold
  - Marketing of wood products (ash) – EU has different regulatory requirements, shipments held because of residual bark in container
  - Industries are varied and decentralized (mills, mulch, paper, Amish, etc…) so outreach is difficult
Future Issues:
- New pests (ALB, SOD) may have larger impacts – quarantines of species that make up larger percentage of forest composition and sales of wood products; EAB/TCD has provided experience on a smaller scale; stress on regulatory capabilities
- Industry may not be interested in processing at risk wood in high risk areas, urban forests

Cathy Corrigan, Pennsylvania Landscape and Nursery Organization
- Appreciation to PDA inspectors for meeting industry needs in spite of downsizing
- Would like single resource for information on other states’ growers shipping interstate (see below)
Future challenges
- Education outside organization is challenging
- Invasive plant list continues to grow
- Push information for consumer

Denise Smith, Operations Manager, Burpee - Willow Hill Facility
- Meeting interstate regulatory requirements – sometimes inconsistent with same crop based on timing
- National Plant Board state regulatory summaries are good resource for interstate shipping regulations, [http://nationalplantboard.org/laws/](http://nationalplantboard.org/laws/), some haven’t been updated since 2008
- Products are often perishable and hold ups can lead to destruction
- Exports more challenging than imports

Questions:
How do industries react to new big pests like BWB and IDM? – Industries watch and see and carry fewer at risk products; local garden centers have to compete with big box stores who will sell these products so consumers buy everything there. Big box stores don’t have the local connections and accountability. Ash is naturally regenerating in forests.

What outreach works? – bad players are hard to reach; coordinate with hardwood industries re supplies/equipment; message to regulated communities may be better received from industry representatives than regulators; face to face meetings with positive message; industry can educate regulators; make it fun and add food; fact sheets; email blasts; consumer driven

Are opportunities for forest product collateral damage utilization increasing?
No. Not as valuable a resource as existing; forest products industry is getting smaller; fear of non-compliance; not enough volume to be profitable

### Natural Disasters and Cleanup of Regulated Material

*Joan Mahoney NY*

![ppt]

~ Break ~

### HIS Report

*Sarah Scally ME*

![ppt]

### CAPS Report to the Eastern Plant Board

*Saul Vaiciunas NJ*

- Round Table Discussion – State Reports included 2012 review and 2013 plans
- Review of PA EAB program
- Review of National Honeybee survey including background and reasons for conducting the survey (especially to justify keeping out foreign bee hives).
- Use of USAPlants, specifically PAPlants to collect and manage field data. We had a hands on demo.
- Review of PA new biosecurity protocols, driven by new legislation allowing growers to designate biosecurity zones on their farms.
- Forest pest outreach through the woodmobile
- Discussion of NAPIS consensus data. Our group had not entered or used such data. If you define NAPIS in narrow terms as a CAPS survey database only then consensus data does not fit in. We decided that it was an issue for SPRO’s to discuss.
• Our group has concerns about the new reporting format for CAPS, specifically the section on the new report where we are required to determine the cost per trap. We feel that you cannot boil down all of our work to a number. We don’t think it is fair to compare the states to each other because each state is unique. Some states are large and requires lots of travel, some states use permanent staff others use temps, some states fund the SSC others partially others not at all. In addition the reports are going to be posted online for all to see and compare. Are we becoming sub-contractors who have to go for the lowest bid?
Update on the Light Brown Apple Moth (Epiphyas postvittana) Program

William Newton
USDA APHIS
Plant Protection and Quarantine
Eastern Plant Board – Harrisburg, Pennsylvania

Agenda
1. Background on the LBAM program
2. Program Initiatives
   a. Plan for California Program
      • Commodity Risk Assessments
      • Nursery Stock Assessment
      • Lure Evaluation Study
   b. LBAM Harmonization Plan

1. Background on the LBAM Program
   • Since 2007, APHIS and the California Department of Food and Agriculture, have maintained a regulatory program for LBAM
   • Program components include:
     – Trapping
     – Regulatory inspection of commodities
     – Treatment with pheromone dispensers of isolated infestations of LBAM

2. LBAM Program Initiatives
   a) Plan for the Program in California
      • Commodity Risk Assessment - to date, 20 crop commodities, when commercially produced and harvested, were exempted from the program's interstate movement requirements
      • Nursery Stock Assessment – evaluates program inspection data to rank species (low, medium, high)
      • Lure Evaluation Study – evaluates if PPQ should implement a four-component lure

   b) LBAM Harmonization Plan
      • APHIS is maintaining the federal regulatory program for LBAM
      • Next steps

Thank you. Questions?
Downy Mildew of Impatiens

“Grower to Gardener……”

Virginia Brubaker
GGSPro Technical Support Supervisor
Griffin Greenhouse and Nursery Supplies
Morgantown, PA
vbrubaker@griffinmail.com
4.9.13

Fast Facts-
- Susceptible: seed grown imps - *walleriana*, vegetative double imps, Balsam and Jewelweed.
- Resistant to: N.G. Imps and Sunpatiens.
- Cool, (60’s low 70’s), humid conditions favor development. Free moisture on leaves.
  - But, it spread rapidly under the hot and dry conditions of 2012.
  - Much easier to prevent than eradicate.

Jewelweed  

I. balsamina
I. capensis
I. pallida

Balsam
Downy Mildew, Sporulation Lower Leaf Surface

Downy Mildew of Impatiens
Fast Facts-
- Spores (zoospores- white fluffy) are easily transported by splashing water (short distances) wind (longer distances).
- Infected plants will not recover.
- No Spores = No Disease?

Downy Mildew of Impatiens
Fast Facts-
- Resistant spores (oospores) form in stems and the crown area and can persist one to five years without a host. Remove the entire plant including roots and plant debris from the landscape. Bag and dispose off site.

No compost piles!

Picture: University of Illinois Plant Clinic
**Downy Mildew of Impatiens**

*Freeze out the oospores?*

Not likely - thought to be viable to -5°F exposed. Most are present in mulch beds.

Survived Long Island and upstate NY winter 2011-12.

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**Downy Mildew- Diagnostics**

- Plant Diagnostic lab- first choice.
- On-Site: Affected plant material placed between 2 layers of moist but not wet paper towel. Seal in ziplock bag, keep at room temperature 36-48 hours, examine with magnification for sporulation.
- If it’s not “waving” it’s not downy.- Margery Daughtrey, Plant Pathologist- Cornell University

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**Downy Mildew of Impatiens**

*How did we get in this fix?*

- 2010-11: High level of infection in the UK and in certain parts of Europe and South Africa.
- 2011: Appeared in landscape beds in parts of the US late summer-early fall. Devastated winter plantings in Florida.

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**Downy Mildew of Impatiens**

- 2012: Active infections in Florida and California winter plantings *Already reporting DM in 2013*

- 2012: Late winter early spring - Reports of greenhouse grown impatiens being infected.

- 2012: Late June to frost- widespread landscape losses especially from Florida north to Maine.

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**What is likely to happen in 2013?**

- 10,000’s of infection sites in the eastern U.S.

- Hanging baskets/containers safe(r)?- Splashing water short range- windborne, longer distances.

- How much protection can be provided by the bedding plant producer?
Grower-DMI Protection

- Determine what DM treatments were made to incoming shipments.
- Beware of over-using Subdue Maxx, resistance mgmt. Use once as a drench, 1 oz. per 100 gals as close to shipping as possible.
- Adorn is another good drench product, 1 oz. per 100 gals. Label requires tank mixing, Fosphite is a good choice at 8 ozs per 100 gals.

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**Fungicide table**

<table>
<thead>
<tr>
<th>Fungicide</th>
<th>Min.</th>
<th>Rate, gal</th>
<th>Rate/100gal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adorn</td>
<td>40</td>
<td>0.25 - 0.5</td>
<td>2.5 gal</td>
<td>Fungicide requires tank mixing with an additional fungicide labeled for downy mildew in the landscape.</td>
</tr>
<tr>
<td>Fosphite</td>
<td>11</td>
<td>1 tsp</td>
<td>12 ozs</td>
<td>No carryover.</td>
</tr>
<tr>
<td>Heritage</td>
<td>40</td>
<td>1 tsp</td>
<td>40 ozs</td>
<td>No carryover.</td>
</tr>
<tr>
<td>Pageant</td>
<td>40</td>
<td>1 tsp</td>
<td>40 ozs</td>
<td>No carryover.</td>
</tr>
<tr>
<td>Alude</td>
<td>40</td>
<td>1 tsp</td>
<td>40 ozs</td>
<td>No carryover.</td>
</tr>
<tr>
<td>Micora</td>
<td>40</td>
<td>1 tsp</td>
<td>40 ozs</td>
<td>No carryover.</td>
</tr>
<tr>
<td>Mancozeb</td>
<td>1</td>
<td>0.5 tsp</td>
<td>2.5 gal</td>
<td>Fungicide drench options:</td>
</tr>
<tr>
<td>Pageant</td>
<td>40</td>
<td>1 tsp</td>
<td>40 ozs</td>
<td>Drench options include:</td>
</tr>
<tr>
<td>Heritage</td>
<td>40</td>
<td>1 tsp</td>
<td>40 ozs</td>
<td>Adorn* (spray or drench)</td>
</tr>
<tr>
<td>Subdue Maxx</td>
<td>1</td>
<td>1 tsp</td>
<td>10 ozs</td>
<td>Subdue Maxx- beware overuse, resistance.</td>
</tr>
</tbody>
</table>

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Home Owners- DMI Protection Advice

- Irrigate early so plants dry quickly.
- Fungicide active ingredients:
  - Mono and di-potassium salts of Phosphorus acid
  - Mancozeb
  - Coppers

Landscaper- DMI Protection Advice

Irrigate from below if possible- keep foliage dry.

- Fungicide spray options include:
  - Fosphite, Alude or Phostrol
  - Heritage or Pageant
  - Micora
  - Segway

Landscaper- DMI Protection Advice

Fungicide drench options:

- Adorn* (spray or drench)
- Subdue Maxx- beware overuse, resistance.

Note: Subdue Granular- label prohibits use for downy mildew in the landscape.

* Label requires tank mix partner
Industry Response

Let’s think this through....

- Obligation to the public?

- What good might come out of this?
“feed their families with food other than potatoes”

- In 1845, potato blight seriously affected the potato harvest. For the majority of Irish people, this was catastrophic because the potato was their main, if not only, food.
- In 1846, the potato crop was completely ruined and it was clear that the Government needed to act.
- Rather than provide food aid, Parliament introduced new taxes (which landlords would have to pay) to raise money for "public works relief".
- The latter was a two-pronged scheme.
  - It created work for labourers so that they earnt enough to feed their families with food other than potatoes.
  - It provided for workhouses to be built to house the absolutely destitute.

Phytophthora History - Potato Famine in Ireland, 1847
A tragic year at Grosse Île at St. Lawrence river
Quarantine station for the Port of Québec from 1833 to 1897
1,300 people burned at Grosse Île

<table>
<thead>
<tr>
<th>Name of Ship</th>
<th>Description</th>
<th>Number of Passengers</th>
<th>Sick</th>
<th>Dead</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS Quaco</td>
<td>Bark</td>
<td>120</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>SS Irish bark</td>
<td>Bark</td>
<td>183</td>
<td>60</td>
<td>50</td>
</tr>
<tr>
<td>SS Ameca</td>
<td>Bark</td>
<td>380</td>
<td>106</td>
<td>150</td>
</tr>
<tr>
<td>SS Bark</td>
<td>Bark</td>
<td>226</td>
<td>7</td>
<td>17</td>
</tr>
<tr>
<td>SS Ship</td>
<td>Bark</td>
<td>189</td>
<td>3</td>
<td>8</td>
</tr>
</tbody>
</table>

Father of plant pathology
(Phytopathology)
Anton de Bary (1831 – 1888)

Phytophthora infestans (Mont.) deBary.

Phytophthora infestans = suggests the devastating infestation

Phytophthora
The Greek phyto = plant and phythora = destroyer

What is Phytophthora?

It is said that if you know your enemies and know yourself, you will not be imperiled in a hundred battles;
if you do not know your enemies but do know yourself, you will win one and lose none;
if you do not know your enemies nor yourself, you will be imperiled in every single battle.

Plants are under attack! Our enemy is Phytophthora

It is said that

- If you know your enemies (Phytophthora) and know yourself (Phytophthora Disease Triangle), you will not be imperiled in a hundred battles;
- If you do not know your enemies (Phytophthora) but do know yourself (Phytophthora Disease Triangle), you will win one and lose one;
- If you do not know your enemies (Phytophthora) nor yourself (Phytophthora Disease Triangle), you will be imperiled in every single battle.

There is archeological evidence of potatoes as a South American food crop dating to 400 B.C.

The Irish population grew from about 6.5 million in 1800 to more than 8 million by 1860.

Thank you
- Supporting me to participate in the 2012 COMTF symposium
- Inviting me to share the history of Phytophthora diseases in PA
Character | Phytophthora (algae) | Fungi
--- | --- | ---
Sexual reproduction | Amoeboid propagation (complete atheridium oospore) | No heterogametangia
Nuclear state of vegetative mycelium | Diploid | Each cell contains one, two, or more haploid nuclei
Mycelium (hyphae) cross walls | No cell walls; coenocytic Hyphae | Cross cell walls (Septate) except Zygomyces (coenocytic hyphae, haploid nuclei)
Cell wall composition | Beta glucans, cellulose (pore whiplash – posterior, the other – anterior) | Chitin
Type of flagella on zoospores | One kind – posterior whiplash | One kind – posterior whiplash
Mitochondria
(Transmission electron microscope) | With tubular cristae | Flat membranous cristae

Thousands Microscopic zoospores produced on plant surfaces

Zoospores aggregate, encyst, germinate, and infect

P. infestans on potato field.

Hairy nightshade implicated in Potato Late Blight Persistence in Maine Dec 12, 2006

Life history of Phytophthora
Zoospores (2N) can fuse in water
No cell wall, just membranes

- Hybrid swarms are occurring in water.
- What this means ecologically is still not fully understood.

### Number of Phytophthora species and subsp.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number species</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986</td>
<td>84</td>
<td>Erwin and Rieiro</td>
</tr>
<tr>
<td>1996</td>
<td>50</td>
<td>Gallego and Higashi</td>
</tr>
<tr>
<td>2006</td>
<td>24*</td>
<td><a href="http://www.Phytophthoradb.org">www.Phytophthoradb.org</a>, PSU</td>
</tr>
<tr>
<td>2012</td>
<td>~330</td>
<td><a href="http://www.Phytophthoradb.org">www.Phytophthoradb.org</a> (PSU)</td>
</tr>
<tr>
<td>2012</td>
<td>~400</td>
<td>Brasier</td>
</tr>
</tbody>
</table>

*Characterized to determine their species identity via sequencing of the internal transcribed spacer (ITS) region of ribosomal RNA-encoding genes.

### Late Blight

**Phytophthora infestans**

The most serious threats to agriculture and food production

**Diversity of genotypes**

- Mating type distribution and changes
- Metalaxyl sensitivity changes

**Potato vs Tomato**

1994 - 2006

### The occurrence of the A2 mating type of Phytophthora infestans

### Occurrence of Late Blight: Potato vs. Tomato

### Phytophthora infestans Occurrence in Pennsylvania

1994 - 2009

### Potato Late Blight Distribution

1994, 2009

### Tomato Late Blight Distribution

1994, 2009
Genotypes Found In Pennsylvania

<table>
<thead>
<tr>
<th>Genotype</th>
<th># of Counties</th>
</tr>
</thead>
<tbody>
<tr>
<td>US-6</td>
<td>1</td>
</tr>
<tr>
<td>US-7</td>
<td>1</td>
</tr>
<tr>
<td>US-8</td>
<td>12</td>
</tr>
<tr>
<td>US-10</td>
<td>2</td>
</tr>
<tr>
<td>US-13</td>
<td>1</td>
</tr>
<tr>
<td>US-14</td>
<td>10</td>
</tr>
<tr>
<td>US-15</td>
<td>3</td>
</tr>
<tr>
<td>US-17</td>
<td>4</td>
</tr>
</tbody>
</table>

Mating Type Distribution in Pennsylvania, 1994 - 2009

<table>
<thead>
<tr>
<th>County</th>
<th>Mating Type</th>
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<tbody>
<tr>
<td>______</td>
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Change of Phytophthora infestans sensitivity to mefenoxam

<table>
<thead>
<tr>
<th>Year</th>
<th>5 ppm Sensitive</th>
<th>5 ppm Resistant</th>
<th>100 ppm Sensitive</th>
<th>100 ppm Resistant</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>4</td>
<td>1</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td>1995</td>
<td>13</td>
<td>1</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>1996</td>
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Number of different genotypes in Pennsylvania Counties (1994 – 2006)

Kinds of the US Genotypes in Pennsylvania

<table>
<thead>
<tr>
<th>US Genotypes</th>
<th>Number of Genotypes</th>
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<td>US-17</td>
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</table>

Diversity of US genotypes in Pennsylvania, 1984-2006

Late blight of tomato and potato
Phytophthora infestans
Genotypes in Pennsylvania

- 1994 - 2006
  - 17 different genotypes
  - Distribution: 21 Counties

- 2006
  - Potato: US-8
  - Tomato: US-14 (Keep changes)
2009
Market-borne tomato late blight

Phytophthora infestans
Transplants sold on consignment in retail stores

Home garden

Phytophthora infestans
Inoculum Sources
Greenhouses?
HISTORY
inspections, sampling, lab work, and regulatory actions

Sudden Oak Death
Occurrence
- 1993: Netherlands and Germany (Shrubs)
- 1995: California (Trees & Shrubs)
  - 2000: Phytophthora ramorum described
- 2001: Oregon (Trees & Shrubs) and Poland (Shrubs)
- 2002: U.K., Spain, France, Italy, Belgium, Denmark, and Sweden (Shrubs)
- 2003: Washington and Canada (Shrubs)
- 2003: U.K. (Trees)

Phytophthora ramorum in Pennsylvania
- 2004: Camellia bonsai plants from CA to a private residence in Bucks county in 2004, incinerated.
- 2006: Rhododendron from OR to a Delaware county nursery, burned.
- 2009: Rhododendrons from OR to a Delaware county rhododendron breeder’s property, incinerated.
- 2012:
  - Sampled 17 trace forwards in 2012.
  - 11 different hosts including soil and water samples.
    - Rhododendrons from OR samples to Snyder county nursery.
    - All incinerated and the area was treated with Clorox.

Phytophthora ramorum
Positives in PA
2004
The First
Phytophthora ramorum positive
in Pennsylvania
Camellia Bonsai plant
Trace Forward Mail order from CA
2006 Delaware Co., PA

Phytophthora isolation
PARP and/or PARPH

Phytophthora ramorum
2006 Delaware Co., PA

Phytophthora ramorum in PA
2009 Near Philadelphia (Rhododendron breeder)
**Phytophthora ramorum**

**2009 Near Philadelphia (Rhododendron breeder)**

---

**Phytophthora ramorum Survey**

**National Forest Stream**

**Eastern Region**

**2010 – 2012/13**

---

<table>
<thead>
<tr>
<th>State</th>
<th>2010</th>
<th>2011</th>
<th>2012/13</th>
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<tbody>
<tr>
<td>AL</td>
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<td>WV</td>
<td>19</td>
<td>20</td>
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---

**Recovery of *Phytophthora ramorum*, %**

<table>
<thead>
<tr>
<th>State</th>
<th>2010</th>
<th>2011</th>
<th>2012/13</th>
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<tbody>
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<tr>
<td>WV</td>
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</tbody>
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---

**Phytophthora in Pennsylvania, 1985 – 2013**

- **Phytophthora diseases in Pennsylvania**
- **We know very little**, Pennsylvania, 1985 – 2013
- **Phytophthora species in PA, 1985 - 2010**
Hosts of Phytophthora diseases, 1985 - 2010

Phytophthora positive clinical samples 1987 - 2010

Phytophthora (1,506 isolates)

<table>
<thead>
<tr>
<th>Phytophthora spp.</th>
<th>Number of isolates</th>
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</thead>
<tbody>
<tr>
<td>PHYTOPHTHORA INFESTANS</td>
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<tr>
<td>PHYTOPHTHORA NICOTIANA</td>
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<td>PHYTOPHTHORA SP.</td>
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<td>PHYTOPHTHORA CRYPTOGEA</td>
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Chrysanthemum (24 isolates)

<table>
<thead>
<tr>
<th>Phytophthora spp.</th>
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<tbody>
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Tomato (146 isolates)

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<tr>
<td>PHYTOPHTHORA INFESTANS</td>
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<tr>
<td>PHYTOPHTHORA NICOTIANA</td>
<td>16</td>
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<td>PHYTOPHTHORA SP.</td>
<td>5</td>
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<tr>
<td>PHYTOPHTHORA CRYPTOGEA</td>
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</table>

Tomato Late Blight, 2009

Buckeye rot
Rhododendron (219 isolates)

<table>
<thead>
<tr>
<th>Phytophthora spp.</th>
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Poinsettia (62 isolates)

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Fraser fir (156 cultures)

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<tr>
<td>PHYTOPHTHORA CACTORUM</td>
<td>32</td>
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<tr>
<td>PHYTOPHTHORA CRYPTOGEA</td>
<td>71</td>
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<tr>
<td>PHYTOPHTHORA SP.</td>
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</tbody>
</table>

Phytophthora species in Pennsylvania
Forest streams vs. Nurseries

- Phytophthora survey, 2006 to 2012 - 23 PA forest streams, near nurseries and garden centers.

2006

- Frequently isolated Phytophthora species in PA
  - Phytophthora gonapodyides (Wildly distributed in streams)
    - Not detected in nurseries and garden Centers
  - Phytophthora citricola (Wildly distributed in streams)
    - Wildly distributed in nurseries and garden Centers
  - Phytophthora cryptotopis (Rarely isolated from streams)
    - Wildly distributed in nurseries and garden Centers

Recent Concerns

P. Ramorum in water – 2012/13

- P. ramorum has been leaking out of infested nurseries in runoff water – into gullies and streams in 5 counties in WA
  - Contributing to the risk that NA2 & EU1 will spread into landscape – joining NA1
- Once P. ramorum is detected in streams it remains positive in Eastern Region
- Algicides – Cu damage to fish?

Phytophthora alni

causes lethal root and collar rot in
alders
Affected wild alder species include:

- **Alnus cordata** - Italian alder
- **Alnus glutinosa** - Common alder (most susceptible)
- **Alnus incana** - Grey alder (most resistant)
- **Alnus viridis** - Green alder

**Invasive Plants in Pennsylvania**

- **European Black Alder**
  - *Alnus glutinosa*

**2010 Significant Events**

**Japanese larch (Larix kaempferi)**
- Japanese larch (Larix kaempferi) foliage is found to strongly support *P. ramorum* sporulation, with the ability to generate thousands of sporangia on a single infected needle.
- Ireland and Wales are found to have woodlands with *P. ramorum*-positive Japanese larch trees for the first time.
- Approximately 600,000 Japanese larch over 5,931 acres have been affected to date in the UK by *P. ramorum*. This is the first widespread and lethal damage caused by the pathogen to a conifer and the first to a commercial plantation tree.

**Phytophthora kernoviae**
- A recently described species of *Phytophthora*
- A recently described species of *Phytophthora*
- An invasive pathogen of forest trees
  - Beech (Fagus sylvatica) and rhododendron (Rhododendron ponticum)
    - Established in woodlands and public gardens in Cornwall, United Kingdom
- Introduction of *P. kernoviae* to the U.S. could threaten both forests and nursery crops.
- This recovery plan is one of several disease-specific documents produced as part of the National Plant Disease Recovery System (NPDRS) called for in Homeland Security Presidential Directives Number 9 (HSPD-9)

**Transplant Inspection**

- Date received
- Truck # & Driver’s name
- Name & Address of supplier
- Name & Address of receiver
- The temperature of truck container
- List varieties and number of transplants
- Attach the Inspection “certificate” from the State of origin

**After Visual Inspection**

**1982 Results of tomato transplants in Pennsylvania fields:**
Inspected and certified by State Plant Inspectors
Boxwood Blight: Cylindrocladium pseudonaviculatum

- Confirmed in CT and NC in October 2011
- In landscapes, garden centers, and nurseries in 7 of 8 counties
- Also MA, MD, NC, NJ, NY, OH, OR, RI, and VA
- Also BC, ON, and QC
- A new disease for North America

Boxwood Blight - Lingering Issues -

Victoria Lynn Smith
CT Agricultural Experiment Station
New Haven, CT
**Boxwood Blight Timeline**

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
</tr>
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<tbody>
<tr>
<td>10/24/2011</td>
<td>Surrey County, NC</td>
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<tr>
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<td>Middlesex County, CT</td>
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<tr>
<td>10/31/2011</td>
<td>Carroll County, VA</td>
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<tr>
<td>12/13/2011</td>
<td>Providence County, RI</td>
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<tr>
<td>12/14/2011</td>
<td>Prince Georges County, MD</td>
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<tr>
<td>12/19/2011</td>
<td>Barnstable County, MA</td>
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<tr>
<td>12/20/2011</td>
<td>Washington County, OR</td>
</tr>
<tr>
<td>12/23/2011</td>
<td>Westchester County, NY</td>
</tr>
<tr>
<td>1/23/2012</td>
<td>Lancaster County, PA</td>
</tr>
</tbody>
</table>

**Boxwood Blight - Pachysandra**

- Sample on June 27, 2012, from a residential landscape
- Confirmed with boxwood blight the previous week
- Small (1 – 3 mm diam) to larger (~ 10 mm diam) necrotic lesions with well-defined margins
- Diffuse yellow haloes

**Regulatory Status of Boxwood Blight:**

- Not federally regulated
- USDA-APHIS-PPQ is investigating the situation to determine if they will take any action
- Regulatory actions in CT are under the statutory authority of The Connecticut Agricultural Experiment Station
  - Sec. 22-84 and Sec 22-98 of the Connecticut General Statutes
Regulatory Status of Boxwood Blight:

- Official diagnosis of disease must be confirmed by CAES plant pathologists
- When a positive confirmation is made, CAES plant inspectors will immediately be notified
- For nurseries or businesses:
  - Stop Sale Notices are issued
- Prevents the sale and movement of infected plants from quarantined property
- For private or commercial properties:
  - Owners/managers will be contacted
  - Initiate trace forwards/trace backs to determine source

Boxwood Blight: new developments

- *Cylindrocladium pseudonaviculatum* = *Calonectria pseudonaviculata*
- Landscape detections keep popping up
- Still no curative fungicide
- Latent infection of overwintering plants

Boxwood Blight: Latent Infections

- Apparently “clean” plants inspected in autumn 2012, prior to storage in hoop houses
- Plants treated with fungicides prior to storage
- Extensive levels of infection upon opening of houses in March 2013
Boxwood Blight Questions

- Latent infections?
- Efficacy of fungicides?
- Length of hold period?
- Pachysandra → boxwood infections?
- Changes to BMP’s needed?
- Length of time for trace-back?
- Effective sanitation for nurseries and landscapers?

Nursery inspectors Tia Blevins, Jeff Fengler, Steve Sandrey, and Peter Trenchard
- Dr. Sharon Douglas, Chief Scientist, Plant Pathology & Ecology
- Mary Inman, Technician, PDIO
- Dr. Bob Marra, Molecular Plant Pathologist
- Dr. Jim LaMondia, Chief Scientist, Valley Lab

Victoria Lynn Smith
Department of Entomology
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P. O. Box 1106
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Phone: 203.974.8474
Email: Victoria.smith@ct.gov
Website: www.ct.gov/caes
United States Department of Agriculture
Animal and Plant Health Inspection Service
Plant Protection and Quarantine
APHIS PPQ 2013 Weed Program Update: Now & future
Scott Pfister
USDA-APHIS-PPQ-PHP

Slide 1

United States Department of Agriculture
Animal and Plant Health Inspection Service
Plant Protection and Quarantine

Slide 2

United States Department of Agriculture
Animal and Plant Health Inspection Service
Plant Protection and Quarantine
APHIS Weed Categories

Categories:
• A1 (Quarantine/Exclusion Targets) - 55 taxa
• A2 (Quarantine/Exclusion with limited distribution and/or Official Control) - 36 taxa
• C (broader distribution) - 20 taxa
• B (Reg. Non-quarantine -- Noxious Seed List) - 9 spp.

Slide 3

United States Department of Agriculture
Animal and Plant Health Inspection Service
Plant Protection and Quarantine

Program Enforcement Authority & Funding Source
• Regulations (listing or delisting)
  - Agency
• Imports
  - Ag Quarantine & Inspection (AQI) User Fees
  - Interstate movement
    - AQI User Fees if tied to illegal import
      - Agency
      - Intrastate movement
        - AQI User Fees if tied to illegal Import
          - Agency
          - State

Slide 4

United States Department of Agriculture
Animal and Plant Health Inspection Service
Plant Protection and Quarantine

Recent Weed Risk Assessments for possible addition to FNW list

<table>
<thead>
<tr>
<th>Taxon</th>
<th>Response</th>
<th>Reason for Inclusion</th>
<th>Conclusion</th>
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</thead>
<tbody>
<tr>
<td>Artemisia asiatica</td>
<td>PERAL</td>
<td>Access to remove from the draft DAPPPA list</td>
<td>High Risk</td>
</tr>
<tr>
<td>Myriophyllum spicatum</td>
<td>PERAL</td>
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<td>High Risk</td>
</tr>
<tr>
<td>Phragmites australis</td>
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<td>High Risk</td>
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<tr>
<td>Rhamnus alaternus</td>
<td>AB Present in California</td>
<td>Low Risk</td>
<td></td>
</tr>
<tr>
<td>Oplismenus hirtellus ssp. undulatifolius</td>
<td>PERAL</td>
<td>Assess the need to list</td>
<td>High Risk</td>
</tr>
<tr>
<td>Melaleuca linariifolia</td>
<td>ALN</td>
<td>Access to remove from the draft DAPPPA list</td>
<td>High Risk</td>
</tr>
</tbody>
</table>

Slide 5

Five species are FNW candidates due to stakeholder petitions to regulate.
• Praxelis clematidea (USDA NRCS)
• Linnobiom laevigatum (CDFA)
• Oplismenus hirtellus ssp. undulatifolius (MD Dept. Natural Resources)
• Nymnpoides cristata (North Carolina Dept. of Agriculture and Consumer Services)
• Vitex rotundifolia (USGS)
PPQ's Weed Regulations: 7 CFR 301.80 - Witchweed

- Discovered in 1956, the infested acreage in NC & SC has been reduced from 440,226 acres to 1,953 acres at the end of FY 2012.
- Funded in 2013
- Eradication remains a goal of the program
- Leon Bunce is the Operations Manager, Jonathan Jones is the Policy Manager

Tie-In to Weed Program

- NAPPRA list will dramatically increase the number of plant taxa regulated as potentially invasive
  - about 286 in phase 1, 110 in phase 2
- Regulate potential pest plants prior to full PRA & formal listing as FNW
- Demand for weed risk assessment will increase
- Demand for permits will increase
- Official control must be addressed (Federally Recognized State Managed Program—FRSMP)

List 1a: List of NAPPRA Candidates for Quarantine Pest Plants (Rnd 1—27 spp.)

- Acacia hockii
- Andropogon gayanus
- Barbarea nigra
- Berberis nigricans
- Bromus rigidus
- Cassinia arcuata
- Ceanothus longipes
- Centrocoris auriculata
- Echinochloa pyramidalis
- Echinodorus hamatus
- Gomphrena celosioides
- Hakea salicifolia
- Hakea sericea
- Impatiens parviflora
- Lanthula cornuta
- Ludwigia hyssopifolia
- Ludwigia prostrata
- Menyanthes trifoliata
- Nidularium cordatum
- Phyllanthus maderaspatensis
- Phytolacca americana
- Polygonatum distinctum
- Polygonatum achewahfunthol
- Poinsettia elegans
- Sarracenia angulata
- Wikstroemia indica

APHIS PPQ 2013 Weed Program Update: Now & future

Questions?
PESTS, THE SCENIC OVERLOOK
Guided Discussion of New Pests and Policy, Survey, Inspection and Industry Impacts

Scott Pfister, PhD
USDA-APHIS-PPQ
April 2013

Traditional regulatory, management, and/or eradication program
Take early lead and then transition to others
FRSMP
Non-traditional responses
Take no action
Federally Recognized State Managed Phytosanitary (FRSMP) Program

- Planning to start accepting petitions September 2013
- If SPRO decides a State-managed phytosanitary program is feasible, the official would reach out to the NPB
- When more than one State intends to regulate a pest under FRSMP, the plan must be coordinated

TCD Options

Option 1 - APHIS does not establish federal regulations; leaves issues to states

Option 2 - APHIS does not establish federal regulations; APHIS provides assistance to states

Option 3 - APHIS provides technical assistance to States, and manages trade issues and international pathways at U.S. ports of entry

Option 4 - APHIS enacts Federal regulation for WTB and the pathogen causing TCD; APHIS provides assistance to states

TCD Decision

A hybrid between Options was chosen. APHIS PPQ will not take regulatory action on thousand cankers disease (TCD) but will continue to provide technical support as resources allow. The development of traps and lures is being funded 2010 Farm Bill and it is anticipated that funding for TCD survey will be made available through the 2011 Farm Bill. Additional methods development, such as regulatory treatments and biocontrol, could be pursued if the resources are made available. A unified USDA response should be pursued through a strategic partnership with the USFS.
Discuss PPQ’s decision with the Forest Service and come to agreement on which agency will provide assistance on specific aspects of the program.

- Program components
  - Traps and lures – USFS/CPHST (FY 2010 funding for 2008 Farm Bill; anticipate funding from FY 2011 Farm Bill spending plan)
  - 2011 survey – USFS/PPQ Regions (anticipate funding from FY 2011 Farm Bill spending plan)
  - Regulatory treatments – CPHST (not yet funded)
  - Silvicultural treatments and forest stand management – USFS
  - Biocontrol (Need to develop a strategic plan with USFS Research, ARS, and CPHST)
  - Determine whether APHIS or USFS will approach the Agricultural Research Service or the National Institute of Food & Agriculture to gain their support.

- Work with Forest Service to finalize the “National Framework for Thousand Canker Disease on Walnut,” including summary of roles and responsibilities.

**Monitor & Review Outcomes**
- Methods
  - In 2010, provided $160,000 to USDA-FS for trap & lure development.
  - In 2011, provided $200,601 to USDA-FS and UC Davis for trap and lure development, $5,600 vacuum steam treatment (Otis/VA Polytech), $35,000 fumigation for veneer logs (Otis/Univ. of TN).
  - In 2013, $25,000 for completing work from 2012.

- Survey
  - In 2011, provided $251,239 for survey in 13 states.
  - In 2012, provided $359,786 for survey in 17 states.
  - In 2013, provided $332,865 for survey in 16 states.
EASTERN PLANT BOARD REGIONAL MEETING

EXECUTIVE COMMITTEE

President – Mike Cooper (ID)
Vice President – Geir Friisoe (MN)
Secretary/Treasurer – Wayne Dixon (FL)
Past President – Carl Schulze (NJ)
Executive Secretary - Aurelio Posadas

Bi monthly meeting with PPQ Senior Staff

BOARD OF DIRECTORS

EPB
Carl Schulze (NJ) NPB Past Pres.
Victoria Smith (CT) EPB President
Carol Holko (MD) EPB Vice Pres.

Monthly BOD Conference calls
1 to 2 NPB/PPQ Leadership Team Meetings

COOPERATIVE AGREEMENTS

1. BRS Pilot Inspection
   4/19/12 – 4/18/13 Amount: $35,000

2. Tracking Technology
   8/8/12 – 8/7/13 Amount: $116,834

3. Systems Approach to Nursery Certification
   8/31/12 – 8/30/13 Amount: $185,000

4. Safeguarding
   11/13/12 – 11/12/13 Amount: $213,800

Total $550,634

FEDERAL REGISTER COMMENTS

Important to provide NPB Comments to the Federal Register and to USDA Request for Comments.

• USDA APHIS PPQ wants/needs to know what the NPB has to say on these comment requests.
• Therefore, it is important for NPB to provide comments especially on issues that impact members.

Ken Rauscher is coordinating this effort for the NPB. Please provide a response.
NPB Committees

[Links to various websites]

NPB work accomplished by members participation on:
- Committees
- Work Groups
- Task Forces

Don’t be shy – “If your not at the table your likely to be on the menu” - C. Roussel

ISSUES

1. Budgets – State and Federal
2. USDA Modernization
3. PPQ Reorganization
4. Sequestration
5. Farm Bill Process
6. FRSMP/DEEP
7. Plum Pox Virus/Canada
8. Phytophthora r. Pre-notification
9. CWR
10. SANC
11. State Risk Model
12. State to State Emergency Response
13. CAPS
14. EAB
15. IPHIS
16. LBAM
17. Boxwood Blight
18. Pest Data collection Systems
19. Firewood

Meetings Attended

9. ASTA
11. Calif. Oak Mortality Task Force
12. SANC Subcommittee
13. Board of Directors
14. NPB/PPQ Leadership Team
15. NORS-DUC
16. ISAC
17. Etc.

ISSUE UPDATE

Budgets – State and Federal
- State Budget Restrictions
- Federal Budget Cuts
- Federal Sequestration
### Plant Protection and Quarantine

<table>
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<th>2010</th>
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<tbody>
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<td>343,409</td>
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Compared to Previous Year:
- AQI: 12,202 (3.6%)
- Cotton Pests: 22,638 (10.8%)
- Field Crop and Range: 22,080 (24.3%)
- Pest Detection: 2,410 (8.5%)
- Plant Protection Method Development: 5,071 (23.4%)
- Specialty Crop Pests: 7,771 (5.1%)
- Tree & Wood Pests: 14,848 (26.7%)
- Total: 55,643 (19.4%)

Compared to FY 2010:
- AQI: 12,202 (3.6%)
- Cotton Pests: 13,028 (4.5%)
- Field Crop and Range: 12,670 (13.7%)
- Pest Detection: 1,373 (6.4%)
- Plant Protection Method Development: 5,071 (23.4%)
- Specialty Crop Pests: 7,771 (5.1%)
- Tree & Wood Pests: 12,376 (25.9%)
- Total: 55,643 (16.2%)

### ISSUE UPDATE

- **Systems Approach to Nursery Certification (SANC)**
  - A major effort by NPB
  - Funded by the Farm Bill
  - 20 states involved
  - Almost 2 members/state
  - 3rd Year
  - SANC Website: (check it out) sanc.nationalplantboard.org
  - 5 subcommittees

- **New Pilot Subcommittee** - to develop a Pilot Program for initial field test next year.
- **Model Bill Subcommittee** - goal to present revised Model bill at 2013 annual meeting.
- **Compliance Template Subcommittee** - completed a draft Compliance Agreement
- **Training Subcommittee** - working with PPQ PDC and HIS to develop training
- **Education and Outreach Subcommittee** - developed website and other materials

- **PPQ Reorganization**
- **Farm Bill**
- **FRSMP/DEEP**
- **Plum Pox Virus/Canada**
- **NAPPO Meetings**
- **NASDA Mid-year Meeting - IPCC**

- **King Amendment**
- **Canadian Seed and Grain Directives**
- **Healthy Habitats**
- **Cooperative Agreements**
- **BRS and Confidential Business Information**
- **LBAM Harmonized Rule**

### Thank You
**Vision for Change**
- Flexibility
- Risk focus
- Efficiency
- Collaboration
- Consistency

**Associate Executive Directors**
- Formerly: Assistant Regional Directors
- Manage State Plant Health Directors
- Supervise Directors of Field Operations and respective programs.

**Directors**
- Formerly: Senior Program Managers
- Oversees their assigned program areas, which divided as function-based:
  - Data analysis, risk and targeting
  - Exclusion and imports
  - U.S. Pre-departure, permitting, biotech, exports, accreditation and trade
  - Pest Detection and responses
  - Pest management
- Supervise National Operations Managers
- Serve as acting AEDs

**National Operations Managers**
- Formerly Senior Program Managers
- Manage assigned programs
- Serve as single national points of contact for assigned programs
Changing Personnel

- New to Fort Collins Hub: Matt Royer, Executive Director
- From Policy Management to Field Operations: Jim Schoenholz, as an Associate Executive Director
- Retirements from Fort Collins and Raleigh: Phil Garcia and Gary Clement
- SPHD Retirements: Ken Glenn from South Carolina and Bernetta Barco from Virginia
- Passing: Tom Chanelli, Raleigh Hub
- Consolidations of states under one SPHD:
  - Alaska/Washington
  - This joins: TN/KY; NC/SC; MS/AL; VT/NH; MA/CT/RI

Smuggling Interdiction and Trade Compliance (SITC)

- SITC management streamlined; consists of one Director and two National Operations Managers
- SITC staff realigned under SPHDs
- Focus efforts on high-risk products
- Develop strategic priorities
- Focus on activities outside of port of entry
- Improve communications with Customs and Border Protection

Program Updates

Pest Detection

- Pest Detection Cooperative Agreements were partially funded, at a level allowed by any constraints of the Continuing Resolution.
- Once budgets are known for the remainder of the FY13 final agreements can be completed.
- Farm Bill spending plan is approved and posted on the APHIS website: http://www.aphis.usda.gov/plant_health/plant_pest_info/pest_detection/farm_bill.shtml

Asian Longhorned Beetle

- Asian longhorned beetle (ALB) was declared eradicated from New Jersey on March 14, 2013.
- Eradication declarations for Asian longhorned beetle (ALB) from Manhattan and Staten Island regulated areas in New York are expected to take place in the second quarter of 2013.
Asian Longhorned Beetle

New Jersey Secretary of Agriculture
Douglass Fisher, PPQ Associate Deputy Administrator; Vic Harabin and New Jersey State Plant Regulatory Official Carl Shultze declare the eradication of ALB from New Jersey on March 14, 2013 along with PPQ and New Jersey employees.

CA European Grapevine Moth Quarantine

- In 2012, seven of 10 counties were removed from the EGVM quarantine.
- Napa County and portions of Solano and Sonoma Counties remain in quarantine.
- Reduction of quarantine boundary from five miles surround the detection to three miles; based on TWG recommendation.

Fruit Flies

- CA Medfly Quarantine ended in March, 2013.
- FL was quarantine free for 2012.
- TX successfully transitioned to Guatemala reared pupae and then back to TX reared pupae.
- TX is currently Medfly quarantine free.
  - Last Medfly quarantine ended in August, 2012.

Emerald Ash Borer (EAB)

- The 2012 survey resulted in the detection of EAB in 74 new counties; of these:
  - 42 (57%) were in public traps
  - 32 (43%) were from public reports/cooperator ground truthing.
- In 2012 the EAB biocontrol production facility supplied 275,000 parasitoids for release in 14 states.
- Regulatory policy modifications permit unrestricted movement of regulated articles within EAB Federal contiguous quarantine areas, except in the protected areas in Illinois and Indiana.
- 18 States have known EAB infestations.

Nematodes

Golden Nematode Eradication - New York - 2012

- 19 counties surveyed; 2,892 production acres, 225 seed acres totaling 7,048 samples; all negative
- 347,609 acres were removed from the quarantine.
- No new detections of golden nematode in New York.
- Nine formerly infested potato production fields now eligible for release from quarantine restrictions after 3 year bioassay.

Pale Cyst Nematode National Survey

- National survey conducted in 7 seed potato producing states, including ME, MN, MT, ND, NV, and WI.
- 24 counties surveyed; 11,203 samples collected, all negative for pale cyst nematode.

Plum Pox Virus

National Stone Fruit Survey – Plum Pox Virus

- Farm Bill funded survey completed in CA, TX and WV.
- Total of 34,360 samples from 27 counties were collected.
- All negative for Plum Pox Virus.

Plum Pox Virus Eradication Program

Pennsylvania

- Third and final year of monitoring
- Survey: 384 orchard blocks; total of 36,668 commercial orchard samples
- 4,000 samples collected from local nurseries
- All negative for Plum Pox Virus.
Plum Pox Virus: PPV Eradication Program

Michigan
- Third and final year of monitoring after deregulation
- Survey conducted in the major fruit production areas in western lower peninsula
- 10,307 samples
- All negative for Plum Pox Virus

New York
- First negative year since 2006
- NY State Department of Agriculture and Markets surveyed 1354 orchards and 18,210 residences, and collected 162,720 samples
- All negative for Plum Pox Virus.

Citrus Health Response Program (CHRP)

Asian Citrus Psyllid
- ACP tested since 2008: 47,135 samples
- Tissue: 23,005 samples
- Positive Trees: 76 total

Additional notes:
- ACP with CT values < 32: 17
- Sq. Mile Delimiting surveys
- ACP with CT values < 36: 94
- Grove ACP detected < 32 CT value: 1 w/ Delimiting underway

Citrus Black Spot Quarantine Update
- Confirmed Nov. 2012 in Polk County
- Grove has been surveyed 3 times by FDACS and PPQ
- Corridor survey conducted
- EAN issued covering 270 acres
- 1,339 acres surveyed in a 9 square mile area surrounding the detection
- Surveys will continue as the season progresses aligned with fruit maturity

California:
- Most of Southern California under quarantine for ACP
- HLB detected in Los Angeles County in 2012 – 5 mile quarantine
- ACP trapped in northern and southern Santa Barbara County
- 3 ACP trapped in Tulare County

Arizona
- Yuma Area 3,865 traps deployed; 2 ACP and 7 HLB samples.
- Central Area 3,670 traps deployed; 2 ACP and 2 HLB samples.
- Lake Havassa Area 54 ACP and 65 HLB Samples. All AZ HLB samples are negative

Questions?
Budget Outlook

Jim Schoenholz, Associate Executive Director

Plant Protection and Quarantine

April 10, 2013

Eastern Plant Board Annual Meeting

Harrisburg, PA

Topics:
1. Historical and Current Budget Allocations
2. 2013 Update
   • Farm Bill funding
   • PPQ adjustments
3. Discussion

2. Historical and Current Budget Allocations

FY 2013 — appropriated, user fees, and emergency funds

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<td>55%</td>
<td>44%</td>
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- 2011: (19,103) (5.8%)
- 2012: (24,335) (7.8%)

Compared to FY 2010:
- 2010: (12,202) (3.6%)
- 2011: (31,305) (9.1%)
- 2012: (55,640) (16.20%)

PPQ Field Operations Adjustments

Positions in 2013 reflect a 10% decrease from the 2010 number of 2954

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United States Department of Agriculture
Animal and Plant Health Inspection Service
United States Department of Agriculture
Animal and Plant Health Inspection Service
Plant Protection and Quarantine

Section 10205 FY13 Funding Summary

1. Enhanced Analysis & Survey
2. Domestic Inspection
3. Pest ID & Technology
4. Nursery Systems
5. Outreach & Education
6. Mitigation Capability

Farm Bill – Funding by Goal

FY09
FY10
FY11
FY12
FY13
Total

$10,000,000
$20,000,000
$30,000,000
$40,000,000
$50,000,000
$70,000,000

Dwindling Budget
- Sequestration and FY 2013 Budget = 7.7% reduction

Opportunity
- Leveraging of resources
- Effectiveness

Thank you for your Partnership
Deployment: CBP Ag Specialists

Nearly 2,400 agriculture specialists are deployed at over 165 Ports of Entry.

Training: CBP Ag Specialists

- Asian Gypsy Moth, Khapra Beetle, Asian Citrus Psyllid
  (new successful initiatives)
- WPM
  (new initiative for CBPAS, CBPO’s and all supervisors)

Training: CBP Ag Specialists

- Agriculture Risk Based Passenger Assessment
  (new successful initiative)
- Agriculture Risk Based Cargo Assessment
  (upcoming initiative)
- Fruit Fly
  (upcoming initiative)

Agriculture Enforcement Alerts

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<th>FY</th>
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<td>FY-12</td>
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<td>1678</td>
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<td>FY-10</td>
<td>1784</td>
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<td>FY-09</td>
<td>0656</td>
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CBP Wood Packaging Material Data

<table>
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<tr>
<th>WPM Reason Description</th>
<th>FYTD 2011</th>
<th>FYTD 2012</th>
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<tbody>
<tr>
<td>Timber Pest Intercepted</td>
<td>609</td>
<td>876</td>
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<tr>
<td>Lacking ISPM-15 Markings</td>
<td>2159</td>
<td>2356</td>
</tr>
<tr>
<td>No Markings and Timber Pest</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>Grand Total</td>
<td>2768</td>
<td>3232</td>
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</table>
67% of the U.S. can environmentally sustain Khapra Beetle

Pathways with confirmed interceptions updated in 2012

<table>
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<tr>
<th>Pathway</th>
<th>FY 2011</th>
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<tbody>
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<td>151</td>
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<tr>
<td>Express Carrier</td>
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<td>1</td>
</tr>
<tr>
<td>Inland</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Land Border</td>
<td>17</td>
<td>3</td>
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<tr>
<td>Maritime</td>
<td>108</td>
<td>136</td>
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ACP/HLB

ACP Interceptions
- 2008: 18
- 2009: 22
- 2010: 18
- 2011: 27
- 2012: 17

Interception of Non-Compliant Wood Packaging Material

Training Components
- Agriculture Specialists
- Officers
- CBP Managers and Supervisors
Pest Risk Committees (PRC)

- 54 Pest risk committees
- Conducts joint special operations with PPQ
- Conducts outreach activities to stakeholders
- Collaborate with PPQ and other state and federal agencies to assess pest risks at POE

Bark on Wood Packing Material

- Curculionidae intercepted under bark attached to WPM
- Commodity: Machine Parts
- Origin: France

New Pest on Cut Flowers

- Origin: Japan
- Host: Chamaecyparis

High Value CITES II

- Dried Gastrodia elata (Orchidaceae)
- Origin: China
- Lacks CITES documentation
- May value between $69,000 and $233,000

Disease on Dried Bamboo Leaves

- Cytospora sp. intercepted on dried bamboo leaves
- Origin: China
- First time intercepted on this host
Firewood from India

- *Rachis punctatus*
  - Intercepted on firewood from India
- Pathway: passenger baggage
- First in Port

Bovine serum without Permit

- Pathway: passenger baggage
- Origin: Germany
- Passenger did not declare and did not obtain a USDA permit
- Passenger was affiliated with an American university

Khapra Beetle Update

- Khapra Beetle (KB) interceptions are significantly down within the NYFO
- Notably, KB interceptions have also significantly decreased in commercial maritime cargo
- Most interceptions include those from passenger baggage and personal effects shipments

<table>
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<th>Fiscal Year 2012</th>
<th>Fiscal Year 2013</th>
<th>Difference</th>
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<tbody>
<tr>
<td>Total Interceptions</td>
<td>37</td>
<td>9</td>
</tr>
<tr>
<td>% Commercial</td>
<td>78%</td>
<td>22%</td>
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Baltimore Field Office

Boston Field Office
Nursery Stock in Baggage
LOGAN AIRPORT

• 3 Grape cuttings
• 1 Oak tree
• 8 Plum Trees
• Origin: Portugal

Snails on Ceramic Tiles
Boston Seaport

• Origin: Italy
• Hygomidae: Xerotricha conspurcata

Bark Beetles on Handicrafts

• Olive wood
• Origin: Kenya
• Scolytidae, species of
• Most likely olive bark beetle

Tortricidae on Bell Peppers

• Archipini, species of
• Origin: Spain
• Part of national operation “Pepper Spray”

Buffalo Field Office

FNWs Arriving with Fresh Produce

• Commercial load of fresh produce entered from Canada. Inspectors noticed seeds on trailer floor.
• Thirteen varieties of seeds collected.
• Two types identified as FNWs.
• Driver admitted bird seed hauled previously and spilled throughout trailer.
• Trailer refused at Michigan border crossing 4 days later for same issue.
Diseased CITES Orchids

- US Citizen entered via bus, returning from China via Toronto.
- “Stuff for tea” was declared.
- A large bag of plants with roots attached, capable of propagation found by CBPA.
- Dendrobium sps. - CITES I and II were identified, infested with actionable Hyphomycetes sp. disease.

CBP Special Operations

- Combined efforts
- Awareness of international holidays
- Knowledge of holiday traditions
- 25 pests we intercepted
- Three civil penalties were assessed

Atlanta Field Office

Cerambycinae in WPM

- Shipment from Russia
- Pallets lacking IPPC, ISPM-15 markings
- Signs of pest were visible and found
- EAN issued and shipment was refused entry

Wood Carvings with Insect Damage

- Passenger from Vietnam returns home with wood carvings
- Unfinished wood showed signs of insect damage
- Carvings were seized and destroyed

Neapolitan Nativity Scene with Pest

- Shipment of unprocessed wood with bark and plant material
- Origin: Italy
- EAN issued
- Importer contacted
Overview

- Budget Update
- ALB
- EAB
- Invasive Plants
- HWA
- SPB

West Virginia Hemlock Conservation Working Group

High Allegheny Hemlock Conservation Project

West Virginia – centered on the Monongahela National Forest but includes the entire hemlock resource in WV

Partners include:
- The Monongahela NF
- The National Park Service
- The Nature Conservancy
- WV Department of Agriculture
- WV Division of Forestry
- US Fish and Wildlife

High Allegheny centered on the Allegheny National Forest and includes the hemlock resource throughout the High Allegheny Plateau in PA and NY.

Partners include:
- The Allegheny National Forest
- The Nature Conservancy
- PA DCNR
- NY DEC
Key Features
Landscape Approach
Collaborative planning and response with multiple stakeholders
Assess risk and prioritize conservation efforts
Public outreach

Focus is hemlock conservation based upon these values:
Ecological
Functional
Recreation
Economic

PHASE 1
- Identify the location of the hemlock resource across the landscape
- Establish broad conservation areas
- Identify conservation values and assign priorities for surveys, treatments, biological control releases

PHASE 2
- Pursue a more integrated hemlock management strategy among cooperators/partners through the Hemlock Conservation Areas approach

Chemical Suppression Program
Approximately 32,800 acres have been infested since 2001.

Southern Pine Beetle (Dendroctonus frontalis) activity continues to be most active in Atlantic, Cape May, and Cumberland Counties but expanding to the north and west.

Crown color progression from green, yellow, red to brown occurs rapidly.

Landowners | SPB Assistance
Southern Pine Beetle Cost-share for those participating in:
- Farmland Assessment Program
- Forest Stewardship Program
Available Fall 2011
Funded by a grant from the US Forest Service

USDA - Natural Resources Conservation Service
- Environmental Quality Incentive Program
NJFS | Managing State Lands

- Mark area for cutting
- Cut within a week
- All cutting done by hand
- Slash cut to below 3'

Looking into:
- Using contractors
- Using machines
- Using cut-and-salvage methods

NJFS | SPB Process

- Detect SPB
- Determine Property Ownership
- Non-DEP Property
  - Municipal Notification
  - Confirm SPB
- Using contractors
- Using machines
- Using cut-and-salvage methods

NJ SPB Mortality Projections

% Tree Mortality Projected for 2006 – 2020 from the USDA Forest Service

SPB General Movement

Challenges…

- Staffing
- Quickly implementing SPB suppression on DEP lands
- Salvage or removal of hazardous trees
- Wildfire danger
- Restoration
- Private property SPB suppression and Municipal permits
General Update on NAASF

- Who we are - an organization of the 20 northeastern, Midwest and New England states and Washington, DC.
- How we work/fit into NASF, Western and Southern groups
- Seven committees made up of state and federal partners: Forest Resource Planning, Coop Forest Management, Urban & Community Forest, State Land Management, Forest Utilization, Fire, and Forest Health

Policy Update

Appropriations:
- FY2013 - all programs have been cut by 5% as a result of sequestration.
- FY14 President's Budget - Forest Health is proposed to be consolidated (both the coop and fed budget line items) and these two new forest health line items will be under the State & Private Forestry header. As consolidated programs, they appear to have taken a cut. However, the competitive portion of forest health is included in the proposed Landscape Scale Restoration program.
- Landscape Scale Restoration (LSR) - President's proposal to formalize the competitive process. Takes a percentage of all the coop programs that would normally go towards competitive and creates a line item, called LSR, to provide added flexibility for states to fund priority projects.
- Invasive Pest Coalition - Established at the beginning of this year, in coordination with NASF, Society of American Foresters, The Nature Conservancy and a few other groups. The Continental Dialogue found that they could not have a presence on the Hill and this new coalition is an effort to be able to lobby on invasive pest species. Most recently, the coalition submitted testimony to congressional appropriators.

Forest Health Committee Update

- Prioritizing the forest health issues and needs.
  - State Foresters are currently working out how best to translate the committee’s needs into a process that can inform the federal budget formulation process and our advocacy work with Congress.
  - We welcome the input of the Plant Board, as we all need to be on the same page when we’re advocating for shared priorities.
- Landscape Scale Restoration (LSR): flexible funding
  - Concept slowly becoming a reality.
  - It’ll help give states more flexibility to address their priority issues than the current federal budgeting process allows.
  - LSR is in the FY14 President's budget.
- Competitive Grants (CARP)
  - To be released in early-mid May along with the rest of state core funding.
Received over 100 proposals, more than available funds. 117 proposals have been ranked and listed online. $5.2 million was asked for to fund the projects, the top 1/3rd of projects are most likely to be funded.

There are multiple pots of money and money can be reprogrammed to pay for certain projects. Fire money could be used to pay for things like forest health or urban.

States and the FS are currently in the process of doing a wholesale revamp of the process over the next year to better align it with the current needs and implementation of forest action plans.

- **Movement of Firewood**
  - Regulations are being drafted for the movement of treated wood
  - Trace where it is bought and sold, trace forwards and backwards
  -APHIS working on treatment standards

- **Disaster Response**
  - Work through fire compact (6 NE states, NY and some Canadian providences)
  - This would give authority under existing authorities
  - Treating as a fuel load so it should work under the fire compact with little problems

Our summer meeting will be July 15-18 in Dubuque, IA.
PPV in PA

Looking back…
Looking forward...

Ruth Welliver

PA Stone Fruit Industry

• Over 7,000 acres (~2,850 hectares) stone fruit
  (Ag Statistics Service, 2007)
• Majority Peach (over 5,000 acres)
• Two stone fruit production nurseries

PPV in PA – Found it!

• Identified in Fall, 1999
• Found most often in peach, but also detected in nectarine, plum, apricot, and flowering almond

Electron Micrograph by Fred Gildow, PSU

PPV in PA – Fought It!

• Statewide survey for first few years (2000-2002).
• Saturated survey in affected four-county area for 7 years (2003-2009)
• Less intensive monitoring survey last 3 years (2010-2012)

Phylogenetic analysis of PPV in the Western Hemisphere

Schneider, 2007
<table>
<thead>
<tr>
<th>Year</th>
<th>Orchard Samples</th>
<th>Homeowner Samples</th>
<th>Other Samples</th>
<th>Total Samples</th>
<th>Total Positives</th>
<th>% Positive</th>
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<tr>
<td>2000</td>
<td>51,429</td>
<td>547</td>
<td>586</td>
<td>52,562</td>
<td>399</td>
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<tr>
<td>2001</td>
<td>80,012</td>
<td>5,556</td>
<td>1,326</td>
<td>86,894</td>
<td>27</td>
<td>0.034</td>
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<td>2002</td>
<td>90,388</td>
<td>15,748</td>
<td>1,913</td>
<td>108,049</td>
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<td>2003</td>
<td>155,970</td>
<td>36,530</td>
<td>6,845</td>
<td>199,345</td>
<td>11</td>
<td>0.006</td>
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<td>2004</td>
<td>166,306</td>
<td>42,730</td>
<td>2,059</td>
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<td>2005</td>
<td>213,005</td>
<td>51,158</td>
<td>3,280</td>
<td>267,443</td>
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<td>2006</td>
<td>166,568</td>
<td>45,702</td>
<td>4,418</td>
<td>216,688</td>
<td>6</td>
<td>0.002</td>
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<td>2007</td>
<td>173,180</td>
<td>44,265</td>
<td>2,689</td>
<td>220,164</td>
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<td>0</td>
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<td>2008</td>
<td>218,198</td>
<td>10,236</td>
<td>2,634</td>
<td>231,062</td>
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<td>2009</td>
<td>204,251</td>
<td>10,843</td>
<td>264</td>
<td>215,358</td>
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<td>2010</td>
<td>81,386</td>
<td>1,012</td>
<td>25</td>
<td>82,422</td>
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<td>2011</td>
<td>87,375</td>
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<td>1,101</td>
<td>89,476</td>
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</table>

**The Face of Eradication**

TOTAL ~1,675 ACRES REMOVED

**Nursery Surveillance**

- Nursery source trees: test every tree
- Nursery blocks: composite samples, ~1-2% of trees sampled

---

**What, me worry?.....**

All PA PPV isolates group together in USDA genomic sequence analysis

~~ EXCEPT ~~

Plums found at homeowner property in 2006.... Don’t cluster with any Western Hemisphere D-strains.

(W. Schneider, USDA-ARS)
Lessons Learned

• Cooperation
  only succeeded because all the participants were willing to keep working together

• Time
  there needs to be a long-term plan, not just a three-year flash in the pan, if you want to make a difference with a pest that is already in the landscape

• Need to build up clean stock programs

It ain’t over ‘til it’s over….

We stand in solidarity with NY

Thank you!
OCTOBER, 29th 2012

SUPER STORM SANDY

NY STATE DEPARTMENT OF AGRICULTURE AND MARKETS

REGULATION, CLEAN-UP, LESSONS LEARNED

NYCRR - Part 139
- 235 sq miles under quarantine in two counties and four boroughs
- Monitor wood movement for proper disposal
- Contain the infestation
- Stop the spread

Regulations

NY ALB Storm Protocols
- Identify affected areas
- Assemble teams
- Contact municipalities
- Identify host material at risk for movement
- Check tree contractors for compliance
- Inspect holding yards

REGULATORY PATROLS
Sandy challenges

- Agency interface – who’s in charge?
- Managing wood movement
- Competing regulations
- Maintaining confidence

AGENCY INTERFACE

Who’s in charge?

MANAGING WOOD MOVEMENT

Floyd Bennett Field woodpile

Floyd Bennett Field woodchips
Chip size

Repurposing

Mulch Operation

COMPETING REGULATIONS

Incineration

Mixed debris pile
LESSONS LEARNED

Next time.....

- Determine lead agency
- Clarify information
- Maintain contact
- Communicate

QUESTIONS?
Eastern Chapter Horticultural Inspection Society

Report of the 39th Meeting
April 9-11, 2013
Harrisburg, Pennsylvania

Meeting Summary

• Emerald Ash Borer
• Multistate Inspection and SANC update
• CWR Research
• Downy Mildew in New Jersey
• Fire Ants in Maryland
• Boxwood Blight in Connecticut
• Pennsylvania's Invasive Pest Survey
• Conifer IPM Services from Pennsylvania

HORTICULTURAL INSPECTION SOCIETY AWARD NOMINATIONS

Carl E. Carlson Distinguished Achievement Award in Regulatory Plant Protection
Galen Ettinger

Distinguished Service Award
Robert Trumbule

Officers for 2013-2014

• President: Jeffrey Brothers, Delaware
• Vice President: Mark Taylor, Maryland
• Secretary: Carole Neil, Maine
• Treasurer: Tia Bievins, Connecticut
• Past President: Sarah Scally, Maine
• Archivist: Stephen Sandrey, Connecticut
• Newsletter Editor: Peter Trenchard, Connecticut

Resolutions

RESOLUTION ADOPTED BY THE HORTICULTURAL INSPECTION SOCIETY, EASTERN CHAPTER, APRIL 11, 2013, IN HARRISBURG, PENNSYLVANIA

WHEREAS the Eastern Chapter of the Horticultural Inspection Society was established to promote education, cooperation and interaction among state horticultural inspection personnel,
WHEREAS the Eastern Chapter of the Horticultural Inspection Society values and appreciates the participation of inspectors from member states during the annual meeting,
WHEREAS the Eastern Plant Board has supported the attendance of state personnel,
WE RESOLVE THAT:

The Eastern Chapter of the Horticultural Inspection Society at its 39th Annual Meeting recognize the Eastern Plant Board for their continued support.
WHEREAS the Eastern Chapter of the Horticultural Inspection Society recognizes the value of uniformity in plant inspection activities and plant pest identification,
WHEREAS the Eastern Chapter of the Horticultural Inspection Society has recently had the opportunity to attend various field oriented training with the purpose of harmonization,
WHEREAS the National Plant Board has provided funds for Eastern Chapter of the Horticultural Inspection Society personnel to attend field training that improves member states plant regulatory efforts,
WE RESOLVE THAT:

The Eastern Plant Board communicate to the National Plant Board the value of our positive experiences and encourage their continued financial support for these beneficial activities.